Title (en)
    Laser interferometer.

Title (de)
    Laserinterferometer.

Title (fr)
    Interféromètre à laser.

Publication
    EP 0431792 A2 19910612 (EN)

Application
    EP 90312613 A 19901120

Priority
    GB 8926574 A 19891124

Abstract (en)
    A laser interferometer uses an acousto-optically modulated laser (100) to produce a pair of orthogonally polarized frequency-shifted beams. The
    beams are passed down a monomode, polarization preserving optical fibre (110) in order to transmit the beams to a cavity (148). The beams
    are separated at polarizing beam splitter (128) and directed down measuring arm (130) and reference arm (132) of an interferometer. The beat
    frequency between the reflected beams is detected at photo-detector (146) which outputs a measuring signal (152). This beat frequency is
    compared to the beat frequency of the beams before entering the interferometer, which is derived by providing a semi-silvered mirror (114) and
    interfering polaroid (116) in the path of the beams up-beam of the interferometer to produce a reference signal (126). The measuring and reference
    signals are compared to determine the movement of the measuring arm of the interferometer. This method of determining the reference signal
    makes the apparatus less susceptible to temperature changes.

IPC 1-7
    G01B 9/02

IPC 8 full level
    G01B 9/02 (2006.01)

CPC (source: EP US)
    G01B 9/02003 (2013.01 - EP US); **G01B 9/02007** (2013.01 - EP US); **G01B 9/02067** (2013.01 - EP US); G01B 2290/70 (2013.01 - EP US)

Cited by
    CN104964641A; GB2304186A; US5781295A; GB2304186B

Designated contracting state (EPC)
    CH DE FR GB IT LI SE

DOCDB simple family (publication)
    EP 0431792 A2 19910612; **EP 0431792 A3 19910918**; **EP 0431792 B1 19940803**; DE 69011289 D1 19940908; DE 69011289 T2 19941124;
    EP 0606677 A2 19940720; GB 8926574 D0 19900117; JP H03180704 A 19910806; US 5274436 A 19931228

DOCDB simple family (application)
    EP 90312613 A 19901120; DE 69011289 T 19901120; EP 93203575 A 19901120; GB 8926574 A 19891124; JP 31568190 A 19901122;
    US 61415990 A 19901116